Dear Friends,

It gives me great pleasure to introduce this issue of Medicamundi, presenting the latest contributions of medical imaging to neurology.

Little more than thirty years ago, imaging of the living brain was virtually impossible, and tumors and other abnormalities could only be visualized by cumbersome and often painful indirect procedures such as pneumoencephalography.

The advent of computed tomography and magnetic resonance imaging in the late 1970’s provided new insights into the brain that would previously have been beyond the neurologist’s wildest dreams.

Further developments of these modalities not only show the structure of the brain and its vessels, but also its function and development. In this issue we present some of the most recent advances in clinical applications and research.

Quantitative CT imaging of brain-barrier permeability offers new hope to stroke victims by enabling more widespread application of recombinant tissue plasminogen activator (rt-PA), which has been shown to be effective in treating acute ischemic stroke.

Diffusion tensor imaging based MR tractography, presented as an experimental technique in Medicamundi some years ago, allows individual visualization of white matter tracts, including information on axon integrity and myelination. It is now widely used in routine clinical practice, including presurgical planning for brain tumors and vascular malformations, and even more significantly, for monitoring the development of the brain in neonates and young children. This is of particular importance in monitoring infants at risk because of preterm birth.

A somewhat unusual article is a study of anterior limbus fractures in infants, demonstrating the ability of the Panoramic open MR system to examine the spine in extreme positions, unrestricted by the conventional cylinder.

We also pay attention to ongoing research projects, including the use of 7T MRI in the investigation of neurodegenerative diseases, and molecular imaging with FDG PET and target-specific ligands for in vivo assessment of the pathophysiological processes in dementia.

Magnetic particle imaging is a promising new technique providing very high spatial and temporal resolution. In this issue we present the first in vivo real-time scans of a beating heart in an animal model.

In addition to these various methods for image acquisition, we present some advanced techniques for processing and displaying the acquired image data.

I trust that you will enjoy reading this issue of Medicamundi, and hope that it will give you an interesting insight into the latest developments in neurologic imaging.

Gene Saragnese
Executive Vice President and CEO Imaging Systems, Philips Healthcare

Instructions to authors

Medicamundi is a journal for medical professionals, published by Philips Healthcare. It provides information on the medical applications of the animal healthcare products, and the results obtained. Articles on related topics, such as economic and technical aspects, will also be considered for publication.

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The Editor-in-Chief and the editorial staff accept no responsibility for opinions expressed by the contributors, and the description of a particular medical procedure does not imply approval of the procedure in all countries.

Example of earlier issues of Medicamundi can be found on the Philips websites: www.philips.com/medicamundi

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The article should not exceed 2500 words, and should be accompanied by an abstract of not more than 100 words.

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All claims in the text must be supported by appropriate references. The references should be restricted to publications referred to in the text, and the list should be kept reasonably short. References in the text should be identified only by Arabic numerals (in square brackets), and be numbered consecutively as they appear in the text. References should be presented in accordance with “Citing Medicine” – the National Library of Medicine Style Guide: See www.nlm.nih.gov.citingmedicine

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Manuscripts may be submitted in English, French, German, Spanish, Japanese, Chinese or Dutch. Accepted articles will be translated where necessary and published in English.

Abbreviations

Except for units of measurement, abbreviations are strongly discouraged. Except for units of measurement, the first time an abbreviation appears, it should be preceded by the words for which it stands.

Informed consent

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Abbreviations

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If there are technical questions regarding images, please contact wsl.zinnematen@philips.com.

Proofs

In place of a proof, a pdf of the laid-out article will be provided. Unless otherwise specified, this will be e-mailed to the first named author.

N.B. Corrections should be restricted to errors, as editorial alterations at this stage can lead to delays in production.

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The principal author of a published Medicamundi article is entitled to 50 complimentary copies. Please provide the address to which these should be sent when submitting the article.

How to submit an article to Medicamundi

Medicamundi welcomes articles on interesting applications of Philips Healthcare products.

Because Medicamundi is a scientific journal, the article should be written in a neutral, factual style, usually in the third person.

Although not all criteria will be applicable for every article, a typical request for publication should cover all or most of the following points:

• the type of healthcare institution
• the clinical problems to be solved
• the type of equipment used
• the examination parameters
• the results obtained, with good-quality illustrations.

Printed images demand a higher resolution than electronic displays. Please read the adjacent section on Electronic submission.

The article should proceed smoothly from start to conclusion, without digressions. As it is an article, rather than a scientific report, the sections should have titles, but not bullet points.

The article should not exceed 2500 words, and should be accompanied by an abstract of not more than 100 words.

Please note that it is not always possible to include all articles submitted—sometimes a selection has to be made! The decision to publish is the responsibility of the Editor-in-Chief, who will review all submitted articles.

Submission of articles and images

Articles for publication in Medicamundi should be submitted to:

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